

In 2006, dRMM completed the £27m government-funded Kingsdale School project, a scheme specifically intended to set new standards for education design, and the project is generally regarded as an architectural and technical tour de force.  
 "Setting new standards for education architecture"  
 Dept. for Education & Skills, on Kingsdale School

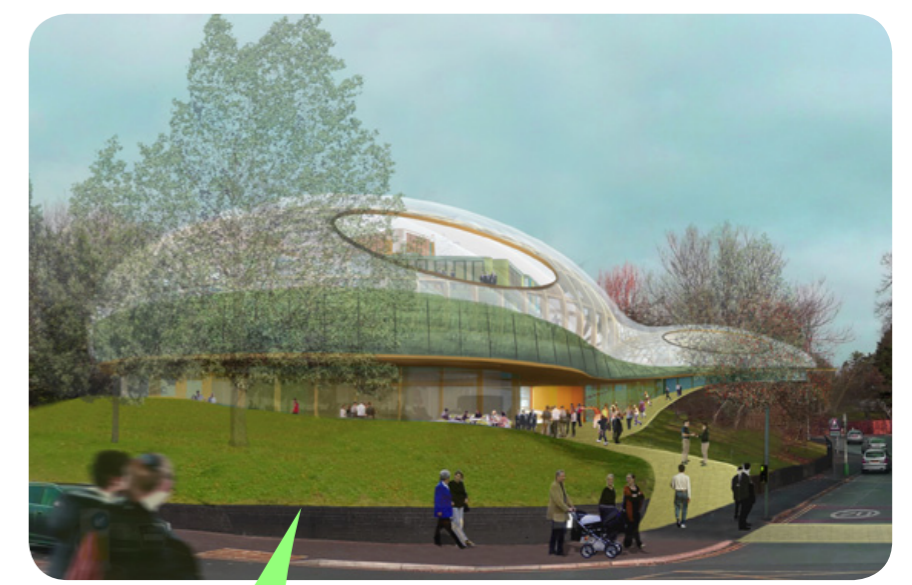
**ADVANCED CONSTRUCTION**  
 Timber Towers, Rundeskøgen, Norway. dRMM with Helen and Hard Architects have designed a highrise apartment building that is structurally and environmentally groundbreaking for The developer Kruse-Bolig (who recently completed the Stavanger Viking football stadium). No steel other than minimised concrete reinforcement will be used. Cladding is a Dutch product consisting of 70% recycled wood fibre, with large windows and fully glazed winter gardens.  
 dRMM was chosen by the British Council to showcase this project at the Venice Biennale of Architecture, 2008.



dRMM is now at the forefront of education architecture design, committed to designing successful innovative education buildings. We have been working on a careful selection of high profile education projects and were specifically chosen by the Government's Department of Education to design an Exemplar School of the Future, for professional reference and construction industry dissemination as a precursor to Building School for the Future (BSF). As such, our energy and enthusiasm for educational architecture is firmly established. We are concerned with the quality of all aspects of the built environment, and seek rigour, integration and client satisfaction in our projects. Our clients range from public bodies such as TATE Gallery, through to Government departments (DCSF), local authorities and private developers. We are a multi-disciplinary, multi-award winning design practice, and have a strong track record of creating innovative architecture: As desired by the University of Melbourne, dRMM produces projects of high calibre, and has the necessary experience to deliver in practice. Designing with an inventiveness and flair that showcases outstanding construction, our architecture is of the highest standard.

Recent innovations include the following:

- The first use of 'variable skin' ETFE roof in education, spanning a multi-use 40x80m2 single volume space.
- The first use of a Structural Insulation Panel System in education. This was for a prefabricated freestanding art block for temporary decant accommodation.
- An all timber deformed geodesic auditorium that creates the largest possible volume from least materials.
- The first UK example of cross-laminated timber construction, prefabricated in Austria, for a music block and adjacent sports hall complex. The project demonstrated that a fast track, prefabricated, low energy sustainable construction material can be creatively modeled to produce striking contemporary architecture.
- dRMM was awarded an M41 Award by the deputy Prime Minister for our innovative approach to consultation.



**CONNECTING CAMPUS AND COMMUNITY**  
 The Royal Deaf School is a vibrant, diverse 'deaf quarter' within the heart of Exeter; one that is urban not institutional. While the campus is bespoke to the needs of the deaf community, it will also embrace the wider hearing one through a permeable 'high-street' arrangement that fosters reverse inclusion and accessibility,

offering a range of activities from shared preschool provision, children's services, audiology clinic, arts and theatre venue, and lifelong learning facilities. Subsequent phases comprise student and key deaf worker housing, community swimming pool, and sports provisions. The campus will benefit not only the students and local community, but contribute to cross-cultural understanding.

# Built Pedagogy





**DURA**

Our hyper-modern school is user friendly. We have prioritised space, daylight and views, offering an enormous mainly transparent etfe volume, in which a variety of modular classroom types can be extensively (re)configured. Classrooms have adjacent spaces to colonise and the school can extend economically. This spectacular inside/outside open space creates a generous social collective, and gives every school the right to plan and change their own departmental layouts according to pedagogy, phasing or ambition.

Spaces between classes are learning environments too, arguably more potently so for the networked student of the mobile digital age. Learning beyond the classroom starts here.

dRMM has experience of working in Academic environments, and is passionate about the need to design enjoyable, safe and rewarding place to learn and teach. We appreciate the complex challenges that such institutions face in delivering 21st century teaching curriculum, even with or among older building stock. The best Educational buildings are both architecturally strong and yet not overly deterministic in the ways in which they can be used. Simple, generous and sophisticated, a framework of positive social networks, where both curriculum based and extended learning is provided for and encouraged.

Flexibility is a priority, both for day-to-day accommodation of various teaching styles, and the inevitable anticipation of changes yet to come. In addition to flexibility, practical concerns must also be addressed, and while these may vary considerably from institution to institution, the underlining issues remain a constant: management, wellbeing, safety, durability. Universities must be sustainable: economically, socially and environmentally. As with all dRMM projects, the University of Melbourne would be considered afresh: bringing experience to problem solving while remaining responsive to user needs.



**KINGSDALE SCHOOL, LONDON**

*"We asked for an aeroplane, the Architects gave us Concorde"*

**Steve Morrison, Head Teacher, Kingsdale School**  
 The design exploits the potential of the existing building, superimposing a new roof over the internal courtyard thereby offering new dining facilities, assembly and performance space, improved circulation, and social and house-based activities.

Within this largest space ever created in a British school, learning goes beyond the curriculum and includes a music performance and cinema auditorium, a 1200 student assembly area, and dining facilities cool enough to 'chill' in. Aerial walkways, bridge and stairs make new circulation connections. 'Useful art' by Atelier van Lieshout provides auditorium services.

**FLEXIBILITY / RANGE OF OPPORTUNITIES  
 SLIDING HOUSE, SUFFOLK**

Three separate simple buildings are transformed by a 20ton mobile roof/wall enclosure which traverses the site, creating combinations of shelter, open-air living, and framing views according to position. This 'envelope' is an autonomous structure spanning (recessed) railway tracks. Movement is powered by hidden electric motors on wheels integrated into the wall thickness.

Sliding House offers radically variable spaces, extent of shelter, privacy, sunlight and insulation. It makes living in a glasshouse possible. It is about the ability to vary the overall building composition and character according to season, weather, or a remote-controlled desire to delight.

web video link;  
<http://www.wallpaper.com/video/architecture/sliding-house-by-drmm/13829144001>

**ARCHITECTS REGISTRATION BOARD OFFICES**

The initial brief for the refit of ARB's offices was not just in recognition of the practical need for a modern workplace, updating an inadequately serviced poor spatial arrangement, but to recognise the importance of a new openness and accessibility in the organisation for the profession and public.



# The Academic Environment





**Selfridges**, commissioned dRMM to create a new corporate entrance and meeting place for international fashion designers in a fluid architecturally striking volume. Informal meeting spaces were developed to allow for varying degrees of privacy.

**Architects Registration Board Offices**  
 The brief called for offices that were transparent, fresh, friendly, lean, modern, and serious.

ARB won 'Best small office' at the international FX awards



**The Dura** is the spectacular main space of the school, where the classroom clusters are perceived as a hilltop town, arranged around two amphitheatre-like Halls. The Dura is an ellipsoidal dome in form with a translucent/translucent etfe skin encapsulating a timber structure. The size and shape of the Dura can be adjusted to meet local site conditions; and to maximize ambition within the limits of available resources. The Dura space can be freely planned; the flat slab deck of 1st floor is a table which can be laid with modular classrooms in numerous combinations. The construction of classroom clusters is characterised by prefabricated engineered timber with various wall treatments. Stacking classmodules below the roofline produces a staggered terraced section. Colour, variety and warmth predominate here, along with many viewpoints, trees and the enveloping presence of sky.



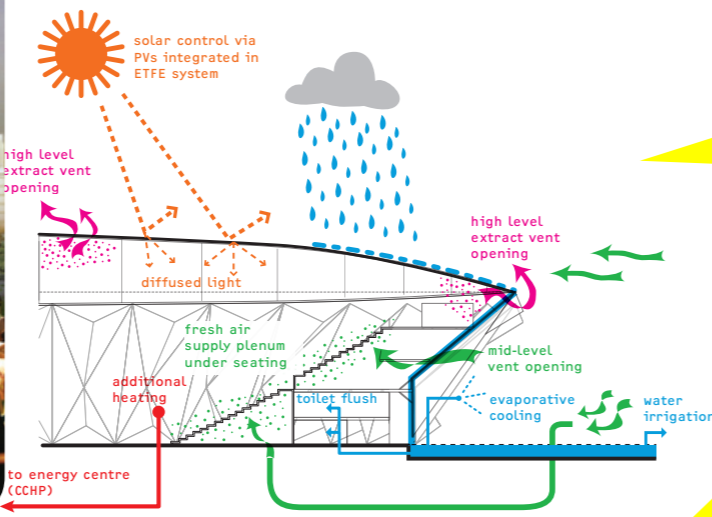
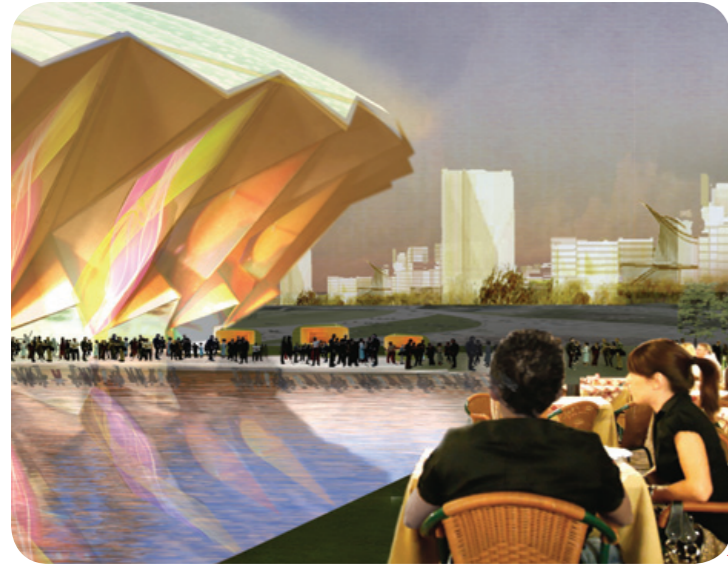
**Interior design of Kingsdale School** also transformed classrooms and offices. Layouts, circulation, fire strategy, provision of services and data, acoustics, heating & lighting, toilets, storage, fixtures and fittings were all included. The new atrium access system has allowed existing internal circulation to be fundamentally reduced and improved. A variety of vision panels in walls and every door provide links between circulation and classrooms, helping orientation, passive surveillance, and daylight penetration.



dRMM's founders are products of the of an art school education process, the studio culture is deeply embedded in our sensibility. Two of the three Directors, Alex de Rijke and Sadie Morgan are graduates of the Royal College of Art, and have subsequently contributed to various teaching programmes within Architecture, Interior Design and Furniture disciplines. Our RCA and AA training and specifically education architecture experience combine to inspire, inform, and enhanced our enthusiasm for designing good working environments.

We have first-rate experience of all the technical requirements in terms of the integration of lighting, environmental control, sound and structure this project would demand. As a design team, we are systematic and pragmatic, continually exploiting evocative, communicative, spatial and tactile qualities. Another important challenge is recognising, developing and/or editing ideas at the right moment.





**TIMBER STADIUM**  
 Won the Retail and Leisure category at MIPIM AR Future Projects Awards 2009

This research design utilises CAD geometry and timber CNC cutting processes to produce an optimised stadium structure with minimum material and waste. The entire structure is cross-laminated mass-timber panels, with a steel cable truss roof span of 100m, and 50% composite plywood, 50% ETFE variable skin roof.

The internal approach is characterised by adaptability and accessibility: sports pitches at grade, 6,000 seats as mobile-retractable clusters; pedestrian and installation vehicle traffic can enter all around the perimeter; ETFE and cable roof structure offers daylight control and multi-point suspension to allow open plan multi-use space.

This is not a specific box but a generous bowl, derived from the need for flexibility, economy, and ecology. The building sets new standards for the potential scale of carbon negative timber structures.



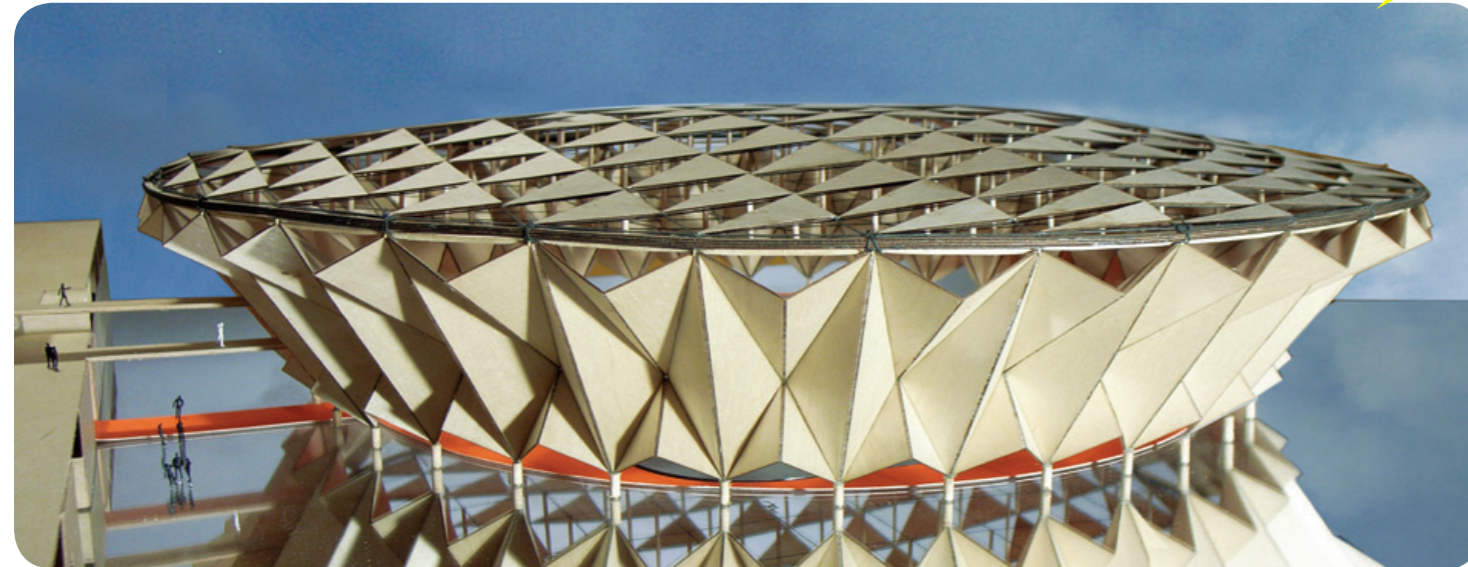
**CLAPHAM MANOR SCHOOL, FACADE**

The detailed treatment of the elevations was developed in close consultation with the school community and local residents. Clear, translucent and solid panels are used as an overlay on the façade to allow daylight to penetrate the interior while controlling solar heat gain. It is a contemporary, jewel-like object into an austere Victorian townscape, offering local pupils a new and highly stimulating learning environment.

**KINGSDALE SCHOOL, ROOF**

This 40 x 80m<sup>2</sup> ETFE Texlon variable skin roof is a technical tour de force, representing Buckminster Fuller's ambition of a climatic envelope.

Integrated (automated) passive/through ventilation and light levels were modelled to define solar gain control. dRMM based the solar shading pattern gain on op-art principles, developing a dynamic 3D solar control principle, offering extraordinary qualities of light.



**ENVIRONMENT AND BUILDABILITY**

These are both core elements to dRMM's methodology. The accepted norm in the production of buildings is that an Architect somehow finds a form, then chooses materials, and then selects a Contractor to build it. We all know the problems that arise during the translation process between conception and construction...

In light of this, the design team led by dRMM Architects deliberately go about building design and production in a different way. We identify suitable materials and systems for specific tasks, analyse characteristics with specialists, fabricators and contractors advising on detail and programme, then we produce the most efficient, economic and buildable form that fits the brief. This produces beauty in a way that is related to overall performance within the construction industry, and not only about aesthetics. This also avoids and mitigates against common problems that plague the construction industry, i.e. cost, time, and quality control.

In essence, we like to make special buildings from market constraints, using generic components in interesting ways.

dRMM's approach to sustainable design is inherently holistic. For the development to be sustainable, it must consider the three interconnecting spheres of environment, society and economy.

The philosophy of the sustainable design approach is to:

- respect the environment.
- maintain health and well-being of the building users.
- be economically justifiable in whole-life costing terms.

Each of our projects are considered against a sustainability matrix to find areas of compatibility between the site, the client objectives and environmental thinking. This could be the minimisation of air, noise and light pollution, in the use of solar energy for passive heating or thermal water provision, or preservation of other resources such as water.







**DESIGN INNOVATION WITHIN CONSERVATION AREAS  
 CLAPHAM MANOR SCHOOL, LONDON**

We have good experience of existing and listed buildings. We take great care in identifying and working with, not against, established qualities and characteristics of existing buildings. Clapham Manor School is a project to extend and refurbish an existing school. The intention is to strike a balance between creating a strong individual presence for the new extension, while respecting the neighbouring architecture that it stands shoulder to shoulder with in the Conservation Area.



**REFERENCE:  
 STRATFORD CITY  
 LONDON 2012 OLYMPIC GAMES ATHLETES' VILLAGE**

Seamus McCartney,  
 Development Manager,  
 Lend Lease Retail & Communities,  
 Regent Arcade House,  
 19 – 25 Argyll Street,  
 London W1F 7TS  
 T 020 7182 9505  
 F 020 7182 9120

**COMMUNICATION**

Good communication is clearly critical in any complicated process such as the design and procurement of a building. dRMM are able to communicate ideas, strategies, requirements and instructions utilising a broad variety of written and visual mediums. By using 3D visuals, 1:1 mock up samples, and detailed computer modelling techniques are all combined with traditional model making, two-dimensional drawings, schedules and specifications to communicate ideas to the workforce on the ground. dRMM have invested in construction industry software to enhance the efficiencies of this process as well as monitor progress, control costs, and safeguard quality.



**KINGSDALE SCHOOL PROJECT**

dRMM was awarded an M41 Award by the deputy Prime Minister for their innovative approach to consultation.

Key to the success of delivering the project and meeting the Scope is the formation of a clear team that can effectively provide the right balance of skills and experience

**Design:**

dRMM have been in practice for fourteen years and this team has the necessary resources, in terms of the experience, creativity and availability of the people involved, to produce a building for the University of Melbourne of the highest quality. All of our completed projects have received critical acclaim and professional recognition. In 2006, dRMM completed the £27m government-funded Kingsdale School project, a scheme specifically intended to set new standards for education design.

Our work on this project led to our relatively young practice being chosen by the DfES to design an 'Exemplar School of the Future' for school/LEA reference, and construction industry dissemination.

**Delivery:**

dRMM propose to team up with the Melbourne based practice DETAIL 3. A collective of highly experienced individuals providing architectural assistance and solutions. Senior personnel have many years of experience within leading architectural practices. The group has unparalleled knowledge of local practice and experience in building procurement, both in traditional and non-traditional delivery methods.

Prior to Detail 3 senior personnel have had extensive experience in collaborative practice arrangements, which have resulted in the delivery of some very successful projects, most notably:

- RMIT University
- TAFE School of Design
- Education and Training Building, Bundoora
- Monash University, Clayton Campus
- Information Services Building
- Performing Arts Centre
- Deakin University, Burwood Campus
- Academic Complex – East
- Academic Building – West
- Australian Centre for Contemporary Art

- Art Gallery and Performance Space
- Eastern Freeway – Stage 1
- Sound walls and pedestrian bridge

Alex de Rijke will head up the design of this project, and travel between our London offices and the Melbourne offices of Detail 3. In addition, a senior member of the dRMM team, Australian Steven Wallis, will be based in these offices throughout all phases of this project. He will be the client's main point of contact during the design stage, ensuring that the frequent meetings required by a project of this size are covered by a member of the dRMM team.

During the construction stage Detail 3 will act as the local Architect. Working in parallel with the design team. In addition they will help coordinate stakeholder issues, feeding the design team with the social and cultural strategy emerging from the public engagement and participation.

Working within the education sector demands flexibility of approach in order to accommodate the specific demands of a teaching environment. We believe our team can draw on our considerable experience of working within constrained and operating contexts to inform our proposals.

For Example dRMM's Kingsdale School project comprised 33 phases, with the school remaining in occupation on campus throughout each and every phase. Such a programme demanded sensitive and flexible project planning and timetabling to ensure mitigation of any disruption to the school, whilst maintaining an efficient construction process.

The on-time and on-budget delivery of every one of these phases Kingsdale is testament to the dedicated and diligent contract administration skills that dRMM can offer.

We are now developing a £35M apartment building, comprising 160 residential and commercial units for Kings Cross Central as part of one of the largest urban regenerations in Europe, plus a £44M mixed-use buildings for London 2012 Olympic Games Athletes' Village.



# FINANCIAL TIMES

## ARCHITECTURE Make way for the new school

There are lessons to learn from a radical extension in south London. Edwin Heathcote writes

Kingsdale School is an enigma. A school full of kids bussed in from rough estates in Brixton and Peckham to study next door to one of Britain's oldest and most respected schools, Dulwich College. It is a slab of system-built, radical modernist utopia in the midst of a leafy, supremely suburban and hugely conservative setting. And, with the completion of an extension earlier this year, it is now one of the most outstanding architectural ensembles in London, its constituent parts drawn from some of the most unproving of typologies – that cipher for corporate ennui, the atrium, and that underdeveloped archetype, the school sports hall.

The original school was built between 1959 and 1962 by what was then the biggest architectural office in the world, the GLC (Greater London Council) Architects' Department. It was conceived by its then head, Sir Leslie Martin (architect of the Royal Festival Hall, also currently being reimagined, as a new way of building schools. They were well-designed but cheap, full of light and air and very different from the towering brick behemoths of the Victorian Board Schools that then dominated the city's low-rise skyline. But, like so many modernist dreams, it cracked and faded and was designated a school in "special measure" during the 1980s, which is probably as grim as it sounds.

Against a background of a huge new schools building programme, most of which were commissioned under the government's achingly bad Private Finance Initiative, Kingsdale attempted its own volte-face through a serious series of architectural interventions. Architects de Rijke Marsh Morgan were brought in and the first phase of their work, the school's awesome covered central space enveloped with a canopy of ETFE (the super-lightweight transparent material that also makes up the domes of the Eden Project), dramatically revived the institution. Results improved, satisfaction from staff and students increased

and architecture was proved to have made a difference. This bodes well for the government's plans to spend £45bn on school buildings during the next 10-15 years. It may sound obvious, but the point that everyone performs better in well-conceived spaces is one that still seems to surprise bureaucrats. The atrium drew worldwide press coverage and its success led to the securing of funding for a further phase, the building of a new sports hall and music room at the rear of the site. I would not normally write about a school extension but, walking round these new buildings with Alex de Rijke, a partner at drmm, I was blown away. They are radical, experimental, effective and, perhaps most important of all, enormous fun – as fine an architecture as you will see in the world's exponentially expanding stock of self-consciously iconic cultural buildings.

The sports hall, a building type that is usually the dumbest of sub-industrial estate boxes, is a hugely theatrical

walls above it. This is the kind of space the Dutch have excelled at, a kind of colourful, pragmatic modernism unstinted by doubt or timidity: de Rijke's Dutch background and experience are more blindingly obvious than ever here. It is built

usually enjoyable space. The music room is smaller and calmer, defined by the curiously amoeboid shapes of its cut-out windows, which are like comic ink-splats spreading across its walls. The architects made tables from the cut-out sections and donated those to the school in a gesture that works beautifully to unite furniture and architecture in a way that is pure modernism, even if I've never seen it achieved before.

The linking spaces aim to bond the rather insulated school better into its surroundings and they are impressively transparent but equally beautifully built. It is drmm's signature to use basic, cheap products in an unexpected manner to create striking images. Here they have employed a generic metal siding product rotated through 90 degrees to create a striated, exquisite cladding and have taken it through to the concrete, which is formed using the same product. It resembles a flattened-out paper fan, the memory of which creases emerging from the material. The level of attention to detail is mesmerising but unfussy: this remains a robust public building for a robust constituency, completely free of pretension.

It is an absolute delight to be able to write about a school building in these terms, a radical and wonderful set of spaces that cost only about £3m. There are signs that school architecture is beginning to be taken seriously as a subject, particularly in Kingsdale's borough, Southwark. Future Systems and Zaha Hadid, both intelligently experimental architects who have built relatively little in this country, have been commissioned on other buildings in the borough. For the moment, though, the triumph is shared between drmm and Kingsdale. It is in rare buildings such as these that architecture can be taken out of the arts ghetto and forced into where it should be, changing people's prospects and everyday lives and illuminating their most impressionable and memorable years.

Lucky gym: pupils are treated to colourful modernism

Michael Mack

### ADAPTABLE

The Sliding House features an autonomous roof/wall enclosure that traverses the site, creating combinations of shelter and open air living, according to the weather or the whim of the user. *"The Sliding House is an extended bravura performance of life-enhancing design possibilities."* Stephen Bayley, The Observer

### AMBITIOUS

*"We asked for an aeroplane, the Architects gave us Concorde."* Steve Morrison, Head Teacher, Kingsdale School

### BEAUTIFUL

*"I think the building is both beautiful and practical. But what really marked out the project for me was the collaboration between architect and client during which the input from each of us, professional and amateur, was valued but critically tested by the other."* The client, on Sliding House

### CONTEMPORARY

drMM won BD Public Housing Architect of the Year 2006 for Wansey Street Housing, Elephant & Castle: *"Wansey Street sets a new model for inner-city mixed tenure housing design. As well as being fresh, contemporary and exciting, it is eminently habitable"* Martin Spring, Building Magazine

### DISTINCTIVE

*"A minor masterpiece"* Jonathan Glancey, Guardian, on No. one Centaur Street

### UNIQUE

Our intention is always to provide different clients with different architectural solutions, making each project unique: *"drMM takes each project as it comes, whether it is a school, a housing block or a restaurant, and gets the most out of it, through the creative use of materials and strategic thinking. The practice refuses to accept that being serious means being boring or average."* Rowan Moore, as chair of the Next Generation Award jury.

## THE UNIVERSITY WISH THE NEW FACULTY OF ARCHITECTURE BUILDING AND PLANNING TO BE DESCRIBED AS ...

### ADAPTABLE

The Sliding House features an autonomous roof/wall enclosure that traverses the site, creating combinations of shelter and open air living, according to the weather or the whim of the user. *"The Sliding House is an extended bravura performance of life-enhancing design possibilities."* Stephen Bayley, The Observer

### AMBITIOUS

*"We asked for an aeroplane, the Architects gave us Concorde."* Steve Morrison, Head Teacher, Kingsdale School

### BEAUTIFUL

*"I think the building is both beautiful and practical. But what really marked out the project for me was the collaboration between architect and client during which the input from each of us, professional and amateur, was valued but critically tested by the other."* The client, on Sliding House



### FUN

*"They are radical, experimental, effective and, perhaps most important of all, enormous fun – as fine an architecture as you will see in the world's exponentially expanding stock of self-consciously iconic cultural buildings."* Edwin Heathcote, Financial Times, on Kingsdale School

*"It's playful and clever and serious at the same time – very few people can pull that off."* AIA/UK Awards jury on Wansey Street Housing

### INNOVATIVE

*"This is a project that pushes at the edges of architecture both materially and spatially. It addresses the very difficult issues of location and site neighbours and is a whole new approach to housing."* Simon Hughes MP, No. one Centaur Street

### INSPIRATIONAL

drMM is working with Exeter Royal Academy for Deaf Education (eRADE) to explore redevelopment options: *"That's what drMM can do – put real joy into architecture, playing with our traditional understandings and taking us to extraordinary places."* Jonathan Farnhill, Chief Executive, eRADE

### SUSTAINABLE

*"Timber is the new concrete."* Alex de Rijke

drMM's approach to sustainable design is led by construction methodology and extensive research experience in materials. Mass timber structures are, in our view, set to dominate the future of sustainable construction. We have delivered pioneering work in this medium at Kingsdale School and Milton Keynes Gallery, and are currently developing designs for several groundbreaking all-timber projects.

### INTERNATIONAL

The question of UK housing was examined on an international stage for the Venice Architecture Biennale, 2008. drMM were invited to contribute to in the exhibition *Home/Away: Five British Architects Build Housing in Europe* at the British Pavilion. The Biennale drew 130,000 visitors over 10 weeks.

### ORIGINAL

*"This is no pastiche. It's a possibility to create a new vernacular."* Chris Horn, Elephant and Castle Regeneration, on Wansey Street Housing

### PARTICIPATORY

In 2002 drMM was awarded an M41 Award by the deputy Prime Minister for their innovative approach to consultation during the Kingsdale School project.

*"The multitude of stakeholders and the cross-fertilisation of different professionals have combined to create some of the most special features of the project. It has that 'wow' factor and there is now a different central focus, with the school associated with wonderful design rather than poor behaviour."* Steve Morrison, Head Teacher, Kingsdale School

### RECOGNISABLE

*"There is little doubt that this is the most important school building completed in Britain in a very long time"* Kieran Long, ICON magazine, on Kingsdale School

### STIMULATING

*"drMM's work is clever, thoughtful and visually arresting and is building them a healthy and enviable reputation."* Edwin Heathcote, FT  
*"I feel so lucky to live in this light and airy space. It feels like you can breathe."* One of the first residents to move in to Wansey Street Housing

### AWARD WINNING

All of our completed projects have received critical acclaim and professional recognition. Our own office/apartment building, No. one Centaur Street, won seven awards including 'RIBA London Building of the Year' and the 'AJ First Building Award'. Kingsdale School was highly commended at the 2008 World Architecture Festival.



drMM  
No. one Centaur Street  
London SE1 7EG, UK  
T +44 (0)20 7803 0777  
F +44 (0)20 7803 0666  
W www.drmm.co.uk